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10/518,320	08/17/2005	Nathan Charles Brown	J3672(C)	6742
201	7590	03/31/2010	EXAMINER	
UNILEVER PATENT GROUP			BROWN, COURTNEY A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/518,320	<b>Applicant(s)</b> BROWN ET AL.
	<b>Examiner</b> COURTNEY BROWN	<b>Art Unit</b> 1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 December 2009.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-7 and 9-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-7 and 9-14 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement (PTO/US/06)  
 Paper No(s)/Mail Date 12/17/09
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date: \_\_\_\_\_  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Acknowledgement of Receipt/Status of Claims***

This Office Action is in response to the amendment filed December 17, 2009.

Claims 1-7 and 9-14 are pending in the application. Claim 14 is newly added. Claims **1-7 and 9-14** are being examined for patentability.

Rejections not reiterated from the previous Office Action are hereby withdrawn.

The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set of rejections and/or objections presently being applied to the instant application.

***Information Disclosure Statement***

The Information Disclosure Statement (IDS) submitted on December 17, 2009 has been considered by the examiner.

The information disclosure statement filed October 7, 2008 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but all of the information referred to therein has not been considered. The Examiner notes that this was

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previously noted in the Final Office Action mailed March 2, 2009 and the Non-Final Office Action mailed September 17, 2009.

***Withdrawn Rejections***

The rejection of claims 1 and 13 under 35 U.S.C. 112, first paragraph has been withdrawn.

The rejection of claims 1-7 and 9-13 under 35 U.S.C. 103(a) over Joshi et al. (US Patent 6,171,581 B1) in view of Galleguillos et al. (US Patent 5,534,245) and Rieley et al. (US 2002/0119108 A1) has been maintained.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 1-7 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joshi et al. (US Patent 6,171,581 B1) in view of Galleguillos et al. (US Patent 5,534,245) and Rieley et al. (US 2002/0119108 A1).**

*Applicant's Invention*

Applicant claims a w/o emulsion antiperspirant composition comprising an oil continuous phase and at least one aqueous dispersed phase, wherein the composition further comprises a dissolved antiperspirant salt, an emulsifier and, in a disperse phase separate from the dissolved antiperspirant salt, a polymer comprising Brønsted acid groups wherein the dissolved antiperspirant salt is in an aqueous dispersed phase and

the polymer comprising Brønsted acid groups is in a phase separate from that of the dissolved antiperspirant salt, and wherein the proportion of aqueous dispersed phase (s) within the total composition is from 50% to 90% by weight, excluding any volatile propellant that may be present.

***Determination of the scope and the content of the prior art  
(MPEP 2141.01)***

Joshi et al. teach water and oil emulsion solid antiperspirant or deodorant compositions comprising by weight of the total composition: **0.1-30% of a silicone elastomer** (emulsifier component of instant invention); 0.05-30% of a gellant; 1-25% of an **antiperspirant** or deodorant active; **1-90% water** and 1-75% oil (abstract) wherein said emulsion composition is solid at room temperature and may be a water-in-oil or an **oil-in-water** emulsion (column 1, lines 55-60). The oils used may be volatile or nonvolatile wherein silicone elastomers are often purchased in the form of gels of the elastomer in a **volatile or nonvolatile silicone**. The oil present in said emulsion composition may be found as part of the elastomer composition alone, the oil phase alone, or **both** (column 11, lines 40-55). Suitable gellants are carboxylated salt gelling agents (Brønsted acid group of instant application) wherein the term "carboxylated salt gelling agent" means a gelling agent that is formed by the reaction of a salt with a compound containing at least one carboxylic acid group (column 4, lines 15-57). Joshi et al. teach that other suitable gelling agents are various fatty acids having the general formula **R--COOH** wherein R is a straight or branched chain alkyl which may be

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unsubstituted, or substituted with one or more hydroxyl groups (column 10, lines 10-24). Preferably, the antiperspirant salts are completely dissolved in the water phase and in some cases small amounts of salts may not be dissolved, i.e. may remain in the crystalline or suspensoid form (column 11, lines 5-10).

***Ascertainment of the difference between the prior art and the claims  
(MPEP 2141.02)***

The difference between the invention of the instant application and that of Joshi et al. is that Joshi et al. do not expressly teach the use of a polymer comprising Brønsted acid groups. This deficiency in Joshi et al. is cured by the teaching of Galleguillos et al. Galleguillos et al. teach antiperspirant deodorant compositions comprising a hydrophilic polymer selected from the group consisting of an ethoxylated, propoxylated or carboxylated hydrophilic polyurethane wherein the polyurethane backbone can be substituted with hydroxyl or carboxyl groups to improve the water solubility or dispersibility of the hydrophilic polymeric binder (column 7, line 6 bridging to column 8, lines 1-11).

The difference between the invention of the instant application and that of Joshi et al. is that Joshi et al. do not expressly teach the use of polymer comprising Brønsted acid groups wherein said polymer is either suspended as a solid in the oil continuous phase (instant claim 2) or emulsified as a separate aqueous dispersed phase (instant

claim 3). This deficiency in Joshi et al. is cured by the teaching of Rieley et al. Rieley et al. teach antiperspirant products utilizing compositions comprising an antiperspirant salt and a water soluble polymer, characterized in that: (i) the polymer comprises Brønsted acid groups and acts as a co-gellant for the antiperspirant salt when mixed therewith in the presence of water; and (ii) the polymer is physically separate from antiperspirant salt prior to application (abstract).

The difference between the invention of the instant application and that of Joshi et al. is that Joshi et al. do not expressly teach level less than 4 mmole/g (instant claim 7) of Brønsted acid groups in the polymers as well as said Brønsted acid groups having an acid value greater than 320(instant claim 12). This deficiency in Joshi et al. is cured by the teaching of Rieley et al. Rieley et al. teach antiperspirant products comprising Bronsted acid groups that are preferably present at a concentration of greater than 0.1 mmole per gram of polymer, more preferably at a concentration of greater than 1.0 mmole per gram of polymer, and most preferably at a concentration of greater than 3.0 mmole per gram of polymer ([0023]). Reiley et al. also teach that the acid value of a polymer is a widely used means of characterization. Acid values generally express the acidity of a polymer in terms of the number of milligrams of potassium hydroxide base required to fully neutralize one gram of the polymer. Preferred polymers have acid values greater than 320 or even greater than 450 ([0025-0026]).

***Finding of prima facie obviousness***

***Rationale and Motivation (MPEP 2142-2143)***

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of the cited references to arrive at a w/o emulsion antiperspirant composition comprising a polymer comprising Brønsted acid groups.

Galleguillos et al. teach that the optically-clear gelled emulsions often exhibit the disadvantages of composition instability during storage; the development of a hazy or milky appearance during storage; a stringy, tacky, oily consistency and other undesirable esthetics(column 2, line 59 bridging to column 3, lines 1-20). Galleguillos et al. teach that transparency had been difficult to achieve in roll-on or gel antiperspirant compositions because the gelling agents either interacted with the antiperspirant compound or were ineffective at a low pH of about 2 to about 6 (column 11, lines 42-46). In addition, Galleguillos et al. teach that emulsion gel compositions often leave a visible residue in the form of a white layer on the skin or clothing (column 2, line 59 bridging to column 3, lines 1-20). On the contrary, hydrophilic polymers tolerate a pH of about 2 to about 6, and resist precipitation from solution in the presence of a relatively high salt concentration, act as a viscosity modifier or thickener, and do not contribute to whitening of skin or clothing (column 6, lines 58-67 of Galleguillos et al.). One skilled in the art would have been motivated to formulate a w/o emulsion antiperspirant composition comprising a polymer comprising Brønsted acid groups with the expectation of an optically clear antiperspirant composition that does not form a visible residue on the skin or clothing. Therefore, given the state of the art as evidenced by the teachings of the cited references, and absent any evidence to the contrary, there

would have been a reasonable expectation of success in combining the teachings of the cited references.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of the cited references to arrive at a w/o emulsion antiperspirant composition comprising a polymer comprising Brønsted acid groups wherein said polymer is either suspended as a solid in the oil continuous phase or emulsified as a separate aqueous dispersed phase.

Rieley et al. teach that it is desirable that the interaction between the antiperspirant salt and the polymer does not occur significantly before they are brought into contact with the human body. Such premature interaction can result in numerous problems including unwanted thickening of the product, poor dispensing, poor sensory properties, and poor antiperspirancy and/or deodorancy performance. Rieley et al. teach that avoidance of premature interaction involves keeping the polymer physically separate from the AP salt which may be achieved with a composition comprising a non-interacting mixture of the AP salt and the polymer ([0016-0017]). One skilled in the art would have been motivated to formulate a w/o emulsion antiperspirant composition comprising a polymer comprising Brønsted acid groups wherein said polymer is either suspended as a solid in the oil continuous phase or emulsified as a separate aqueous dispersed phase with the expected benefit of minimizing or eliminating the interaction between the antiperspirant salt and the polymer before they are brought into contact with the human body. Therefore, given the state of the art as evidenced by the teachings of the cited references, and absent any evidence

to the contrary, there would have been a reasonable expectation of success in combining the teachings of the cited references.

With regard to claims 7 and 12, Riely et al. do provide data for these limitations. In addition, Reiley et al. teach that **acid values may be measured experimentally or may be estimated theoretically ([0026])**. The U.S. Patent Office is not equipped with analytical instruments to test prior art compositions for the infinite number of ways that a subsequent applicant may present previously unmeasured characteristics. When as here, the prior art appears to contain the exact same ingredients and applicant's own disclosure supports the suitability of the prior art composition as the inventive composition component, the burden is properly shifted to applicant to show otherwise.

Claim 10 is a product-by-process claim. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

***Examiner's Response to Applicant's Remarks***

Applicant's arguments, see pages 5-7, filed December 17, 2009, with respect to the rejection of claims 1 and 13 under 35 U.S.C. 112, first paragraph have been fully considered and are persuasive. The rejection of claims 1 and 13 has been withdrawn.

Applicant's arguments filed on April 7, 2008, with respect to the 103 rejection of claims 1-7 and 9-13 over Joshi et al. (US Patent 6,171,581 B1) in view of Galleguillos et al. (US Patent 5,534,245) and Rieley et al. (US 2002/0119108 A1) have been fully considered but they are not persuasive. Applicant argues that here is nothing in Joshi et al. that discloses or suggests compositions as described by the subject claims in which a polymer comprising Bronsted acid groups is present in a phase separate from that of the dissolved antiperspirant active. However, the Examiner disagrees (agrees) because Joshi et al. teach water and oil emulsion solid antiperspirant or deodorant compositions comprising suitable gellants are carboxylated salt gelling agents

(Brønsted acid group of instant application) wherein the term "carboxylated salt gelling agent" means a gelling agent that is formed by the reaction of a salt with a compound containing at least one carboxylic acid group (column 4, lines 15-57). Joshi et al. teach that other suitable gelling agents are various fatty acids having the general formula R--COOH wherein R is a straight or branched chain alkyl which may be unsubstituted, or substituted with one or more hydroxyl groups (column 10, lines 10-24). The secondary teaching of Rieley et al. was joined to show that antiperspirant products utilizing compositions comprising an antiperspirant salt and a water soluble polymer, characterized in that: (i) the polymer comprises Brønsted acid groups and acts as a co-gellant for the antiperspirant salt when mixed therewith in the presence of water; and (ii) the polymer is physically separate from antiperspirant salt prior to application (abstract) was known at the time the instant invention was filed. Thus, one of ordinary skill in the art would be motivated to combine the teachings of Joshi et al. and Rieley et al. and devise compositions in which a polymer comprising Bronsted acid groups is present in a phase separate from that of the dissolved antiperspirant active.

Applicant argues that although Rieley et al. does disclose polymers comprising Bronsted acid groups, the use thereof is in a product in which the polymer is physically separate from the antiperspirant salt prior to application. Applicant argues that to achieve this "separation" of polymer and antiperspirant salt, Reiley et al. discloses (a) the co-application of the polymer and antiperspirant salt from separate compositions and (b) the use of a non-interacting mixture of AP salt and polymer such as co-dispersions of the AP salt and polymer in a non\*solvent carrier material. Thus Applicant

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concludes that Reiley et al. provide a very clear teaching away from the use of its polymer together with an antiperspirant salt in compositions that include an internal aqueous phase, disclosing that in such a situation the polymer and antiperspirant salt should be applied from separate compositions. However, the Examiner disagrees with Applicant's arguments because Rieley et al. clearly states that the polymer comprises Bronsted acid groups such as carboxylic acids groups (abstract and claim 1 and 6 of Rieley et al.). Rieley et al. also teaches that the polymer is physically separate from the antiperspirant salt (abstract). Thus, Reiley et al. do teach the use of its polymer together with an antiperspirant salt in compositions in such a situation the polymer and antiperspirant salt should be applied from separate compositions.

**New Rejection(s) Necessitated by the Amendment filed on December 17,**

**2009**

Claims 1 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joshi et al. (US Patent 6,171,581 B1) in view of Galleguillos et al. (US Patent 5,534,245) and Correia (EP 0812182 B1).

***Applicant's Invention***

Applicant claims a w/o emulsion antiperspirant composition comprising an oil continuous phase and at least one aqueous dispersed phase, wherein the composition further comprises a dissolved antiperspirant salt, an emulsifier and, in a disperse phase separate from the dissolved antiperspirant salt, a polymer comprising Brønsted acid groups wherein the dissolved antiperspirant salt is in an aqueous dispersed phase and the polymer comprising Brønsted acid groups is in a phase separate from that of the dissolved antiperspirant salt, and wherein the proportion of aqueous dispersed phase (s) within the total composition is from 50% to 90% by weight, excluding any volatile propellant that may be present. In addition, said antiperspirant composition comprises volatile propellant present at a level of from 30 to 95% by weight.

***Determination of the scope and the content of the prior art  
(MPEP 2141.01)***

The teachings of Joshi et al. are incorporated herein by reference and are therefore applied in the instant rejection as discussed above.

***Ascertainment of the difference between the prior art and the claims  
(MPEP 2141.02)***

The difference between the invention of the instant application and that of Joshi et al. is that Joshi et al. do not expressly teach the use of a polymer comprising

Brønsted acid groups. This deficiency in Joshi et al. is cured by the teaching of Galleguillos et al. Galleguillos et al. teach antiperspirant deodorant compositions comprising a hydrophilic polymer selected from the group consisting of an ethoxylated, propoxylated or carboxylated hydrophilic polyurethane wherein the polyurethane backbone can be substituted with hydroxyl or carboxyl groups to improve the water solubility or dispersibility of the hydrophilic polymeric binder (column 7, line 6 bridging to column 8, lines 1-11).

The difference between the invention of the instant application and that of Joshi et al. is that Joshi et al. do not expressly teach an antiperspirant composition in which volatile propellant is present at a level of from 30 to 95% by weight. This deficiency in Joshi et al. is cured by the teaching of Correia. Correia teaches a propellant driven emulsion antiperspirant aerosol composition comprising 10-50% of a base and 50-90% of a propellant, the base being in the form of a water-in-oil emulsion and comprising a dissolved aluminum salt, a volatile silicone, and a silicone surfactant ([0008]).

***Finding of prima facie obviousness***

***Rationale and Motivation (MPEP 2142-2143)***

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of the cited references to arrive at a w/o emulsion antiperspirant composition comprising a polymer comprising Brønsted acid groups.

Galleguillos et al. teach that the optically-clear gelled emulsions often exhibit the disadvantages of composition instability during storage; the development of a hazy or

milky appearance during storage; a stringy, tacky, oily consistency and other undesirable esthetics(column 2, line 59 bridging to column 3, lines 1-20). Galleguillos et al. teach that transparency had been difficult to achieve in roll-on or gel antiperspirant compositions because the gelling agents either interacted with the antiperspirant compound or were ineffective at a low pH of about 2 to about 6 (column 11, lines 42-46). In addition, Galleguillos et al. teach that emulsion gel compositions often leave a visible residue in the form of a white layer on the skin or clothing (column 2, line 59 bridging to column 3, lines 1-20). On the contrary, hydrophilic polymers tolerate a pH of about 2 to about 6, and resist precipitation from solution in the presence of a relatively high salt concentration, act as a viscosity modifier or thickener, and do not contribute to whitening of skin or clothing (column 6, lines 58-67 of Galleguillos et al.). One skilled in the art would have been motivated to formulate a w/o emulsion antiperspirant composition comprising a polymer comprising Brønsted acid groups with the expectation of an optically clear antiperspirant composition that does not form a visible residue on the skin or clothing. Therefore, given the state of the art as evidenced by the teachings of the cited references, and absent any evidence to the contrary, there would have been a reasonable expectation of success in combining the teachings of the cited references.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Joshi et al. and Correia to arrive at a w/o emulsion antiperspirant composition in which volatile propellant is present at a level of from 30 to 95% by weight. Correia teaches that propellant driven antiperspirant aerosol

compositions exhibit remarkably low corrosion problems, including pinholing. In addition, Correia teaches that said aerosol antiperspirant compositions may generate relatively low amount of visible deposit on application to the skin, and also have remarkably good sensory properties when applied to the skin ([0015]). Therefore, given the state of the art as evidenced by the teachings of the cited references, and absent any evidence to the contrary, there would have been a reasonable expectation of success in combining the teachings of the cited references.

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

#### ***Response to Arguments***

Applicant's arguments, filed December 17. 2009, with respect to the 103 rejection of Claims 1 and 14 are over Joshi et al. (US Patent 6,171,581 B1) in view of Galleguillos et al. (US Patent 5,534,245) and Rieley et al. (US 2002/0119108 A1) have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

The claims remain rejected.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney A. Brown whose telephone number is 571-270-3284. The examiner can normally be reached on 9:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Courtney A. Brown  
Patent Examiner  
Technology Center 1600  
Group Art Unit 1616

/Ernst V Arnold/  
Primary Examiner, Art Unit 1616